

Troubleshooting

In the event of a malfunction, fuses and electrical connections should be checked for condition and security.

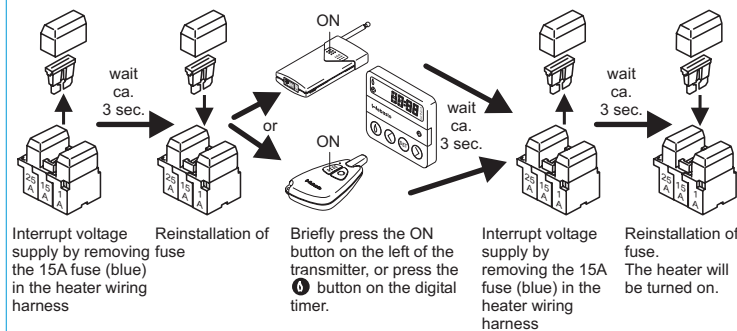
In the event of a malfunction, the heater will shut down in its "fault lock-out" mode, no visual indication will occur on the display of the timer.

Before consulting an authorised Webasto dealer, try to deactivate the fault lock-out condition.

The following malfunctions can be eliminated by the owner:

| Fault description | Possible cause | Remedy |
|--|--|---|
| Heater turns itself off automatically (= fault lock-out) | Combustion is neither established during the start-up sequence nor during the repeated start-up; flame extinguishes during operation | Turn off heater and then back on again (max. 2 times) |
| Heater fails to turn on | No power is supplied to heater | Check power supply to heater as well as earthing terminals |
| Heater turns off during heating operation (= fault lock-out) | Heater overheats due to lack of coolant | Top up coolant in accordance with manufacturer's directions |

Fault lock-out deactivation



Note:
The heater will start operating as soon as the fuse is replaced!

If this action does not correct the malfunction, consult your authorised Webasto dealer

Operating Instructions

Telestart T70

Thermo Top and Thermo Top T

Tele Thermo Top T



Webasto Thermosysteme International GmbH
Postfach 80 - D-82132 Stockdorf - Hotline (01805) 93 22 78
Hotline (0395) 55 92-353 - <http://www.webasto.de>

General Information

Dear Webasto Customer !

We assume that the workshop / service center that carried out the installation explained to you the operation and principle of functioning of your new heater to your complete satisfaction. With these operating instructions we would like to provide you with an overview of the use of the Thermo Top, Thermo Top T and Tele Thermo Top T heaters as well as the hand-held transmitter Telestart T70.

Maintenance and Safety Information

Within the scope of the StVZO (Road Traffic Licensing Act) "General Design Approvals" laid down by the Federal Office for Motor Traffic exist for the *Thermo Top* water heaters.

The installation of the units must be carried out in accordance with the enclosed installation instructions. The installation must be checked in accordance with the Legal Provisions for Installation. For details refer to the installation instructions.

The year of the initial operation must be durably marked on the heater's nameplate by removing the non-applicable years.

The heater must be switched **off**:



Danger of explosions and asphyxiation

- at filling stations and tank farms.
- in locations where flammable vapours or dust may accumulate (e.g. in the vicinity of fuel-, coal-, sawdust or grain depots).
- in enclosed spaces (e.g. garages). This should also be considered when pre-setting heater operating times or using the Telestart remote control.

The heater must **not** be



- exposed to temperatures greater than 120°C (storage temperature). Exposure to such temperatures may cause damage to the electronic components.
- operated without a minimum level of 20% of good quality antifreeze in the water of the heating circuit.

The heater **must**:



- be operated with the fuel specified on the nameplate.
- In the case of a severe build-up of smoke, unusual combustion noises or fuel smell, the heater is to be put out of operation by removing the fuse and may only be restarted after it was inspected by Webasto-trained personnel.
- be operated at least once a month for 10 minutes, with the vehicle engine cold and at the lowest fan setting. The heater should be checked annually by a qualified expert, preferably prior to the heating season commencing.

Liability claims:



- Webasto will not assume any liability if the installation instructions and the notes contained therein are not observed. The same applies to improperly performed repairs or those where others than genuine replacement parts have been used. In those cases, the heater's General Design Certification and thus the General Operating Permit (homologation) will be invalidated as a consequence.

Notes:

After an operating period of 30 minutes the fuel supply of the heater will be exhausted. Allowing the vehicle engine to run for two minutes will replenish the fuel supply.

Thermo Top T heaters are equipped with an additional thermostat control resulting in a higher water outlet temperature during the heating-up phase.

Application: Vehicles with a cubic capacity of more than 1800 cm³.



Operation

Depending on the type of heater control installed, the heater can be operated by a digital timer or Telestart.

Prior to switching on the heater, the vehicle's heating system is to be turned to "warm". In the case of 3-speed blower fans, the vehicle's blower fan is to be set to the lowest speed, in the case of 4-speed blowers to the second speed. In the case of infinitely variable fans adjust to at least 1/3 of the fan capacity.

NOTE:

We recommend that the heating time be set in accordance with the driving time.
heating time = driving time
Example: With a driving time of approx. 20 minutes (one way), we recommend setting an operating time of 20 minutes.

If the heater is equipped with the summer/winter switch option, the switch is to be set in accordance with the respective season. In the "winter"  position, the heater will deliver normal heating output and in the "summer"  position only the vehicle's fan for ventilation of the vehicle's interior will be put into operation.

Setting the Operating Time

Press the OFF button to call up the next operating time.

To store the setting:

- do not actuate any button for 10 seconds, or
- actuate the ON button.



Returning to the Default Setting

Press the ON and OFF buttons simultaneously for approx. 10 seconds until the LED extinguishes.

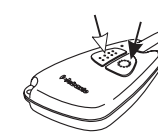
Default setting: heating mode, 30 minutes.



Checking the Batteries

Press the ON or OFF button.

or



| Batteries | LED | Action |
|------------|--|--|
| okay | after 1 sec. lights up for 0.5 sec. in red (heating) or in green (ventilation) | |
| low charge | after 1 sec. flashes in orange for 3 sec. | - Warm up batteries to above 0°C - Replace batteries at the next opportunity |
| discharged | after 1 sec. lights up for 5 sec. in orange | - Warm up batteries to above 0°C - Replace batteries |

Telestart T70

for Thermo Top
and Thermo Top T optional
with Tele Thermo Top
and Tele Thermo Top T
part of the delivery volume



General

The wireless Webasto Telestart T70 enables Webasto heating units - Thermo Top, Thermo Top T, Thermo Top Z/C and Thermo Top E - or the vehicle fan to be switched on and off from a distance of up to 600 m. To switch on the vehicle fan for ventilating the vehicle interior requires a mode change on the transmitter to be carried out.

The receiver limits the operating time once the heater has been switched on by the transmitter. The maximum range can be achieved in open country. In built-in areas the range is likely to be reduced.

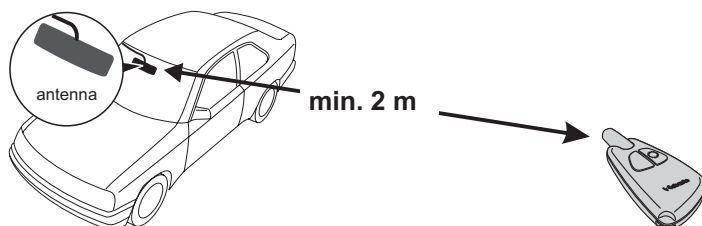


NOTE:

A minimum distance of 2 m must be maintained between the Telestart hand-held transmitter and the antenna in the vehicle in the following cases:

- teaching the codes of the Telestart hand-held transmitter
- switching the heater on and off
- switching the vehicle fan on and off.

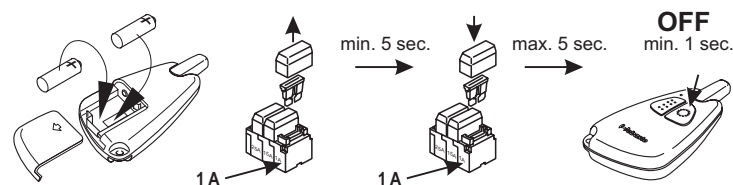
Or else, cover the antenna at the hand-held transmitter with your hand during the transmitting operation.



Programming Telestart Transmitters

1. Place batteries into the battery compartment of the transmitter.
2. Remove fuse 1A (black) from the heater's fuse holder (voltage interruption).
3. Wait at least 5 seconds.
4. Replace fuse in heater's fuse holder and within 5 seconds press the OFF button on the transmitter for at least 1 second.
5. "Learning" is completed.

A second or third hand-held transmitter can be programmed in the same manner.



Checking the Mode

Simultaneously depress and hold down the ON and OFF buttons.

LED illuminates:
in red: heating mode
in green: ventilating mode



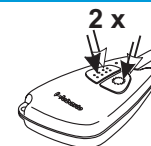
LED extinguishes:
- when the buttons are released, or
- after 10 seconds

Mode setting

Depress the ON and OFF buttons simultaneously twice within one second.

Upon the second actuation, the LED will change its colour and illuminate until the buttons are released.

The newly selected mode (heating or ventilation) will be set in the receiver the next time a signal is transmitted.



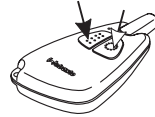
Switch on heater or ventilation

Hold the hand-held transmitter with the antenna in upright position and push the ON button for 1 to 2 seconds.



NOTE:

In the 'heating' mode, the vehicle's heating system is to be set to "warm" prior to leaving the vehicle. In the 'heating' and 'ventilation' modes, the vehicle's fan switch is to be turned to position 1 in the case of 3-speed blower fans, and to position 2 in the case of 4-speed blowers. In the case of infinitely variable fans adjust to at least 1/3 of the fan's capacity.



Switch off heater or ventilation

with hand-held transmitter:

Hold the hand-held transmitter with the antenna in upright position and press the OFF button for 1 to 2 seconds.



with digital timer:

instant heat button to be pressed twice.

Checking and Setting the Operating Time

The operating time of the heater or the vehicle's fan can be preset on the transmitter in increments of 10 minutes. The operating time is factory-set at 30 minutes.



NOTE:

In the case of Thermo Top and Thermo Top T heaters, an operating time of 20 or 30 minutes has to be set in the 'heating' mode. Example: The vehicle is used for travelling to work and back. With a driving time of approx. 20 minutes (one way), we recommend setting an operating time of 20 minutes.

Checking the Operating Time

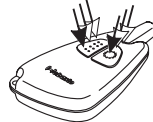
Simultaneously actuate the ON and OFF buttons within one second three times in rapid succession.

3 x



NOTE:

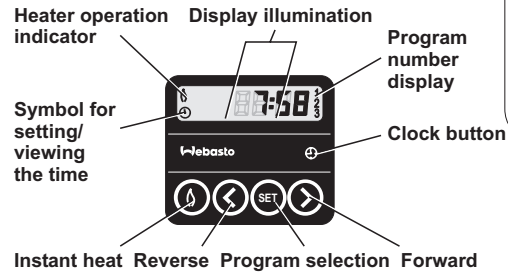
The first coded flashing signal that is emitted immediately upon the third actuation of both buttons has to be included into the count.



The LED flashes in accordance with the preset operating time.

| No. of coded flashing signals | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------|---------|---------|---------|---------|---------|---------|
| Operating time | 10 min. | 20 min. | 30 min. | 40 min. | 50 min. | 60 min. |

Digital Timer with 3 Time Settings



Note:
Be sure to take into account the switching from summer time to winter time (and vice versa).

| | |
|---|---|
| General | The start of the heating operation can be precisely preset anywhere between "1 minute" up to "24 hours". Three starts may be programmed only one of which, however, can be activated. |
| Switching the heater on | Manually: by pressing the "instant heating" button Automatically: by programming the heater starting time The program number is shown on the display and the display is illuminated. |
| Switching the heater off | Manually: by pressing the "instant heating" button Automatically: after the programmed operating time has elapsed The display field is no longer illuminated. |
| Setting the time of the day | Press the "Clock" button and subsequently "Forward" or "Reverse" . |
| Viewing the time | Press the "Clock" button |
| Programming heater starting time | Press the button Within 10 sec. press the "Forward" or "Reverse" button until the desired time for the start of the heating operation is shown on the display. If a different program number is required, press the button. |
| Erasing programmed times | Briefly press the button. |
| Selecting preset starting time | Press the button within 10 sec. periods until the program number associated with the desired preset time is displayed |